

In Th Claims:

1. (Currently Amended) A door assembly comprising:

a top rail;

a bottom rail;

a hinge stile;

a latch stile;

a plurality of spaced apart spacers disposed between said top rail, said bottom rail, said latch stile, and said hinge stile, said spacers having a first side and a second side;

a first sheet of fiber-strengthened composite fire-resistant insulating material coupled to said first side;

a second sheet of fiber-strengthened composite fire-resistant insulating material coupled to said second side;

said first sheet of fire-resistant material, said second sheet of fire-resistant material and said plurality of spacers defining a void therebetween;

a first outer skin coupled adjacent to said first sheet opposite said plurality of spacers; and

a second outer skin coupled adjacent to said second sheet opposite said plurality of spacers.

2. (Currently Amended) A door assembly as recited in claim 1 wherein said first sheet of fire-resistant insulating material and said second sheet of fire-resistant insulating material comprises a gypsum-based material.

3. (Currently Amended) A door assembly as recited in claim [[1]] 2 wherein said gypsum-based material has a fibrous mat therearound.

4. (Original) A door assembly as recited in claim 1 wherein said spacer is selected from the group of wood spacers, gypsum pads, concrete, corrugated cardboard, and a honeycomb material.

5. (Original) A door assembly as recited in claim 1 wherein said spacer is formed of a plurality of studs.

6. (Original) A door assembly as recited in claim 5 wherein said plurality of studs are composed of steel.

7. (Canceled)

8. (Currently Amended) A door assembly as recited in claim [[7]] 1 wherein said void has fill material therein.

9. (Currently Amended) A door assembly comprising:

a first vertical edge;

a second vertical edge spaced apart from said first vertical edge;

a top rail coupled to said first vertical edge and said second vertical edge;

a bottom rail spaced apart from said top rail coupled to said first vertical edge and said second vertical edge;

a plurality of spaced-apart spacers disposed between said first vertical edge, said second vertical edge, said top rail and said bottom rail, said plurality of spaced-apart spacers having a first side and a second side;

a first sheet of fiber-strengthened composite fire-resistant insulating material coupled to said first side;

a second sheet of fiber-strengthened composite fire-resistant insulating material coupled to said second side;

said first vertical edge, said second vertical edge, said top rail, said bottom rail, said spacers, said first sheet and said second sheet defining a void therebetween;

a first outer skin coupled to said first sheet opposite said plurality of spacers; and

a second outer skin coupled to said second sheet opposite said plurality of spacers.

10. (Original) A door assembly as recited in claim 9 wherein said first sheet of fire-resistant insulating material is coupled to said first vertical edge, said second vertical edge, said top rail and said bottom rail.

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11. (Currently Amended) A door assembly comprising:
a first vertical edge;
a second vertical edge spaced apart from said first vertical edge;
a top rail coupled to said first vertical edge and said second vertical edge;
a bottom rail spaced apart from said top rail coupled to said first vertical edge and said second vertical edge;

a plurality of spaced-apart spacers disposed between said first vertical edge, said second vertical edge, said top rail and said bottom rail, said plurality of spaced-apart spacers having a first side and a second side;

a first sheet of fiber-strengthened composite fire-resistant insulating material coupled to said first side;

a second sheet of fiber-strengthened composite fire-resistant insulating material coupled to said second side,

said second sheet of fire-resistant insulating material is coupled to said first vertical edge, said second vertical edge, said top rail and said bottom rail;

a first outer skin coupled to said first sheet opposite said plurality of spacers; and

a second outer skin coupled to said second sheet opposite said plurality of spacers.

12. (Original) A door assembly as recited in claim 9 wherein said first fire-resistant insulating material and said second fire-resistant insulating material comprises a gypsum-based material.

13. (Amended) A door assembly as recited in claim ~~[[9]]~~ 12 wherein said gypsum based material has a fibrous mat therearound.

14. (Original) A door assembly as recited in claim 9 wherein said plurality of spaced-apart spacers are selected from the group of wood spacers, gypsum pads, concrete, corrugated cardboard, and a honeycomb material.

15. (Original) A door assembly as recited in claim 9 wherein said plurality of spaced-apart spacers are formed of studs.

16. (Original) A door assembly as recited in claim 15 wherein said plurality of studs are composed of steel.

17. (Canceled)

18. (Previously Amended) A door assembly as recited in claim 9 wherein said void has fill material therein.

19. (Original) A door assembly as recited in claim 9 wherein said first sheet of fire-resistant insulating material, said second sheet of fire-resistant insulating material, and said plurality of spaced-apart spacers comprise a core having a predetermined thickness, said first vertical edge, said second vertical edge, said top rail and said bottom rail having said predetermined thickness.

20. (Currently Amended) A method of forming a door comprising:
coupling a plurality of spaced-apart spacers, a pair of rails and a pair of stiles between a first sheet of fire-resistant insulating material and a second sheet of fire-resistant insulating material to form a plurality of unfilled voids therebetween;
coupling a first outer skin to the first sheet of fire-resistant insulating material; and
coupling a second outer skin to the second sheet of fire-resistant insulating material.

21. (Original) A method as recited in claim 20 wherein coupling forms a void between said plurality of spaced-apart studs, said first sheet of fire-resistant insulating material and said second sheet of fire-resistant insulating material.

22. (Currently Amended) A method as recited in claim 20 further comprising filling said void with a lightweight fire-resistant insulating material different from the first fire-resistant insulating material and the second fire resistant insulating material.

23. (Original) A method as recited in claim 20 wherein coupling a plurality of spaced-apart spacers comprises coupling a plurality of spaced-apart studs between a first sheet of fire-resistant insulating material and a second sheet of fire-resistant insulating material.

24. (Currently Amended) A door assembly comprising:
a first vertical edge;
a second vertical edge spaced apart from said first vertical edge;
a top rail coupled to said first vertical edge and said second vertical edge;
a bottom rail spaced apart from said top rail coupled to said first vertical edge and said second vertical edge;

a plurality of spaced-apart spacers disposed between said first vertical edge, said second vertical edge, said top rail and said bottom rail, said plurality of spaced-apart spacers having a first side and a second side;

a first sheet of fire-resistant insulating material coupled to said first side;
a second sheet of fire-resistant insulating material coupled to said second side; and

said first vertical edge, said second vertical edge, said top rail, said bottom rail, said spacers, said first sheet, said second sheet and said spacers defining a plurality of voids therebetween, said plurality of voids forming an airspace.

25. (Previously Amended) A door assembly as recited in claim 1 wherein said top rail, said bottom rail, said hinge stile and said latch stile have a first thickness, said spacer, said first sheet of fire resistant material and said second sheet of fire resistant material having the first thickness.

26. (New) A door assembly comprising:

a first vertical edge;

a second vertical edge spaced apart from said first vertical edge;

a top rail coupled to said first vertical edge and said second vertical edge;

a bottom rail spaced apart from said top rail coupled to said first vertical edge and said second vertical edge;

a plurality of spaced-apart spacers disposed between said first vertical edge, said second vertical edge, said top rail and said bottom rail, said plurality of spaced-apart spacers having a first side and a second side;

a first sheet of gypsum-based fire-resistant insulating material coupled to said first side;

a second sheet of gypsum-based fire-resistant insulating material coupled to said second side;

said first vertical edge, said second vertical edge, said top rail, said bottom rail, said spacers, said first sheet and said second sheet defining a void therebetween;

a first outer skin coupled to said first sheet opposite said plurality of spacers; and

a second outer skin coupled to said second sheet opposite said plurality of spacers.

27. (New) A door assembly as recited in claim 26 wherein said first sheet and said second sheet of fire-resistant insulating material is coupled to said first vertical edge, said second vertical edge, said top rail and said bottom rail.

28. (New) A door assembly as recited in claim 26 wherein said first sheet and said second sheet of fire-resistant insulating material are fiber-strengthened.